



Admissions

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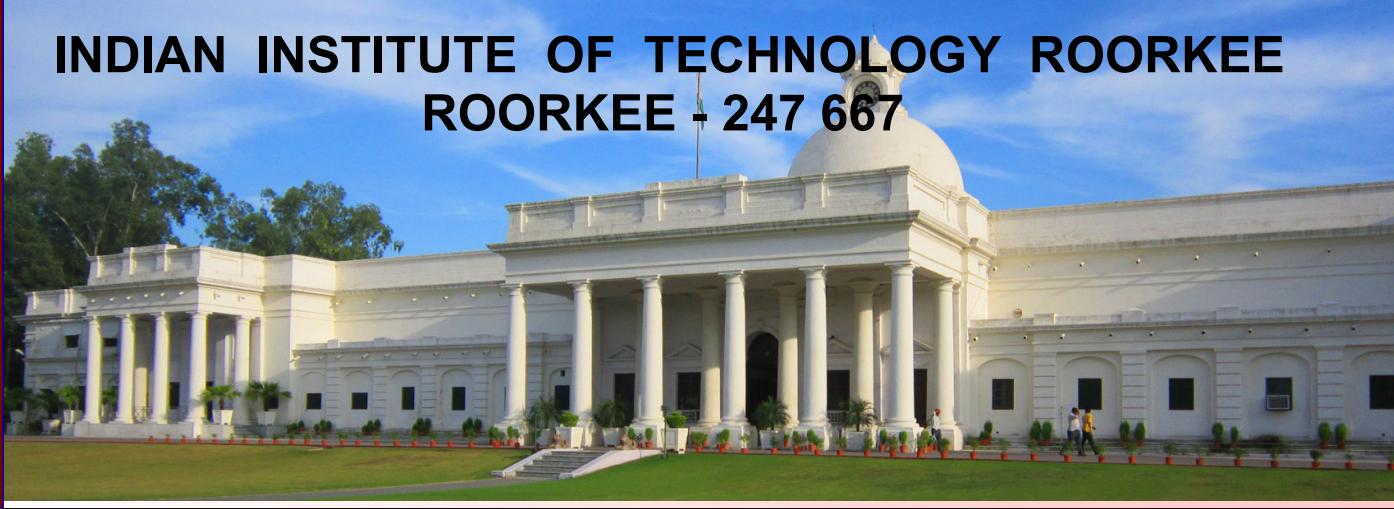
POSTGRADUATE
PROGRAMMES

M.TECH./ M.ARCH./ M.U.R.P.

INFORMATION BROCHURE

2019-20

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
ROORKEE - 247 667



Indian Institute of Technology Roorkee

Postgraduate Admission-2019

INFORMATION BROCHURE (M.Tech./M.Arch./M.U.R.P.)

SCHEDULE

Events	Dates
Announcement of GATE-2019 Result	March 16, 2019 (Saturday)
Start of Online Application Process	March 18, 2019 (Monday)
Last Date for Online Application Submission and Deposit of fee	April 12, 2019 (Friday) till 5:00 P.M.

IMPORTANT INSTRUCTIONS

1. The candidates are advised to read each and every instruction given in this Information Brochure very carefully before applying Online.
2. All entries should be carefully made while applying online. IIT Roorkee will not be responsible for wrong entries. Candidates shall be sole responsible for the eligibility, correctness and authenticity of the information / documents provided in the online application.
3. Online application submitted by the candidates shall be considered final and binding. Requests for making correction in the online application shall not be entertained.
4. Online application **found incomplete in any form** will be summarily rejected. No correspondence / communication will be entertained in this regard.
5. The last date for submission of online application shall not be extended. Accordingly, no request shall be entertained for accepting the application after the last date. IIT Roorkee will not be responsible for technical error while making the online application / payment of fee.

Therefore, candidates are advised to submit their application well in advance and not to wait for the last moment.

Online applications will be scrutinized, relevant documents checked / verified for their authenticity.

6. Candidates may seek admission to more than one department (maximum four departments and 13 programmes). **A candidate should submit one Application only.**
7. **Application Fee for Indian National (non-refundable): Rs.300/- for General/OBC category and Rs.150/- for SC/ST/PD category candidate.** The candidates can deposit the requisite application fee by using net banking or debit/credit card facilities. **The Fee will not be accepted through any other mode.**
8. **Application fee for Foreign Nationals:** Nil
9. **Choices (max.13) once given shall not be changed at any stage for any reason after submission of Online application form.**
10. After submitting the Application, all admission related enquiries may be made to the PG Admission Office, IIT Roorkee only.

Subject of the E-mail should be: '**M.Tech Admission 2019 Query**'.

Text matter of the E-mail should consist: (i) Application Number (ii) Name of the applicant (iii) Details of query. Department specific queries should be addressed to the respective departments.

For further information, please contact:

Contact	Telephone Numbers
PG Admissions Office Indian Institute of Technology Roorkee, ROORKEE-247 667 (Uttarakhand)	(01332) 284010 (Tel.) (01332) 285875 (Tel.)
www.iitr.ac.in or http://pgadm.iitr.ernet.in	<i>e.mail:</i> pgadm@iitr.ac.in

1. POSTGRADUATE PROGRAMMES

1.1 Postgraduate Academic Programmes leading to M.Tech./M.Arch./M.U.R.P. (Two years duration)

The postgraduate programmes in Engineering and Architecture include 40 full-time programmes in different specializations leading to M.Tech./M.Arch./M.U.R.P. degrees. In addition, the departments of Hydrology and Water Resources Development and Management, also offer PG Diploma programmes. Details of different academic programmes leading to M.Tech./M.Arch./M.U.R.P. degree available in different departments along with their codes, GATE Disciplines, the minimum educational qualifications for admission are given in **Table-1**. The curriculum structure of these programmes is given on the Institute website: www.iitr.ac.in

The ordinances and regulations in force determine the general academic requirements for the above programmes for full-time and part-time students.

Admission is open to full time sponsored and part time sponsored candidates also.

The minimum duration of all academic programmes would be four semesters for Full-Time candidates and six semesters for Part-Time candidates

1.2 Dual Degree Programme

The M.Tech/M.Arch./MURP candidates pursuing PG degree in any deptt/centre of IITR are permitted to switch over to Ph.D. Programme after 1st year subject to satisfying eligibility criteria.

2 ELIGIBILITY REQUIREMENTS FOR ADMISSION TO M.Tech./M.Arch./MURP DEGREE PROGRAMMES

Candidates who possess the minimum educational qualifications as given in **Table-1** are eligible to seek admission to these Postgraduate programmes. In addition, candidates of General and OBC category must have secured at least 60% marks or CGPA of 6.00 on a 10 point scale at the qualifying degree level; but for SC/ST/PD category candidates, this percentage is 55% or 5.50 CGPA on a 10 point scale. The marks awarded for the qualifying degree will be considered for eligibility.

In case of CGPA awarded on different point scale, **Table-2** as approved by the Senate of the Institute will be considered for deciding eligibility.

These essential eligibility requirements are applicable to all the categories of candidates, viz: regular, full-time sponsored and part-time sponsored candidates. Other conditions for these three categories are as follows:

2.1. Regular Candidates including GATE qualified Foreign Nationals

(a) Admission to Postgraduate programmes leading to M.Tech./M.Arch./M.U.R.P. degree as given in **Table-1**, will be open to the GATE qualified candidates on the basis of valid Normalized GATE marks in the disciplines. **The normalized GATE marks of different papers will be used to prepare the merit list for programmes of a department. These Normalized GATE marks will be calculated by IIT Roorkee as follows:**

$$\text{Normalized GATE Marks} = \frac{\text{Normalized Marks Out of 100 OR Marks (if Normalized marks not applicable)}}{\text{Maximum Marks Awarded in that Paper in that year}} \times 100$$

Example: Assume marks scored by the candidate is 64 out of 100 in EE Paper, where maximum marks in EE paper of that year is, say, 92. Then normalized GATE marks of the candidate in EE paper will be as follows:-

$$\text{Normalized GATE Marks in EE Paper of the candidate} = \frac{64}{92} \times 100 = 69.57$$

(b) **Final year students who will be completing all the requirements of their qualifying examination including backpaper(s)/supplementary(ies) before the date of registration may also apply.** Such candidates will be required to submit a certificate as per the proforma given in **Annexure-1** along with the application form. Such candidates may be admitted provisionally but they will be required to produce the proof of having passed the qualifying degree with the required percentage of marks or CGPA latest by **September 30, 2019**, failing which their admission shall be cancelled.

A candidate appearing in any part of the qualifying examination including supplementary examination etc. after the date of registration shall not be considered to have qualified for admission in the year 2019-20 and if such a candidate gets registered provisionally his/her admission shall be terminated.

- (c) Direct admission upto 10% of the intake without GATE will be offered to IIT graduates with a minimum CGPA of 8.00 on a 10 point scale.
- (d) Candidates having AMIE/AMIS/AMIIChE/AMIIM/Grad IETE, who possess B.Sc. or Diploma in engineering and have at least three years research, teaching or other professional experience at the submission of last date of application acquired in relevant field, are also eligible to apply for admission to M.Tech. courses.

2.2. Full-Time Sponsored Candidates

- (a) These candidates must have a minimum of two years of full-time work experience till the last date of submission of application form (subject to provision 2.1[d] as for regular candidates) in responsible capacity in a Registered Firm/Company/Industry/Educational and Research Institution/Govt./Quasi Govt./Autonomous Organization in the relevant field in which admission is being sought. The Firm/Company/Industry shall either be a public sector undertaking or a public limited undertaking registered in a stock exchange or a private concern whose annual turnover during the past 2 years exceeds Rs. 5.0 crores. For a candidate employed in an educational Institution, it should be recognized by AICTE.
- (b) Full time sponsored candidates with GATE and without GATE can apply for admission to different academic programmes but their admission will be based on performance in an Interview/Written Test to be held at IIT Roorkee. The candidates will be called for Interview/written test on the basis of their results of the qualifying degree.
- (c) Candidates should submit the sponsorship certificate along with the application, duly signed by the Head of the Institution/Organization on proforma as per **Annexure-2**.
- (d) A few candidates are also admitted under QIP, Early Faculty Induction Programme of AICTE and Defence Research & Development Organization Schemes, for which the admission procedure is separate. For further

details, please contact **PG Admission Office, Indian Institute of Technology Roorkee, ROORKEE-247667.**

The sponsored candidates who meet the above mentioned eligibility conditions, along with the minimum educational qualifications given in **Table-1** should apply.

Preference in admission will be given to those candidates who are GATE qualified.

2.3. Part-Time Sponsored Candidates (Three years duration)

- (a) These candidates must satisfy condition 2.2 (a) as for full-time sponsored candidates, with the additional requirement that such organizations must be located either at Roorkee or within a radius of 20 km from Roorkee.
- (b) Part time sponsored candidates with GATE and without GATE can apply for admission to different academic programmes but their admission will be based on performance in an Interview/Written Test to be held at IIT Roorkee. The candidates will be called for Interview/Written Test on the basis of their results of the qualifying degree. However, no self sponsored candidate will be admitted for part time study.
- (c) There will not be any age restriction. However, preference will be given to those who are below 45 years of age.
- (d) For admission to a postgraduate programme as a part-time student, No Objection Certificate from the Head of the Institution/Organization as per **Annexure-3** must be submitted along with the application.
- (e) For part-time students, the concerned academic department will draw up the detailed academic programme on an individual department basis.
- (f) The part-time students will be required to attend all lectures, tutorials and practical classes for the courses prescribed for them and must satisfy the attendance requirements.
- (g) The part-time students will not be eligible for any scholarship, prize etc.
- (h) The status of a part-time student will not be changed from part-time to a regular full-time student.
- (i) Members of the Staff of the Indian Institute of Technology Roorkee seeking admission as part-time sponsored candidates should submit the sponsorship certificate from the Registrar and the Staff working in different projects in the Institute should submit the sponsorship certificate from the appointing authority.

Preference in admission will be given to those candidates who are GATE qualified.

Note:The candidates working in Institute/ University awarding PG degree itself are not eligible for admission as part-time or full-time candidate, if facilities are not available except QIP candidates.

2.4. Foreign Candidates

- (a) Foreign nationals seeking admission to postgraduate courses should apply through the Govt. of India, if they wish to come through any Govt. supported programmes or under Cultural Exchange Programmes, or through Educational Consultants (India) Ltd., New Delhi. They may seek necessary help from the Indian Embassy in their country or their Embassy in India. In addition to these avenues, a provision of direct admission for Non-Resident

Indians (NRI's) and self-financing Foreign National candidates exists for Postgraduate programmes in Engineering and Architecture.

- (b) Foreign nationals are required to undergo medical examination as per medical rules of the Ministry of Human Resource Development, and have to undergo test for HIV at NICD, Delhi within one month of their admission. The admission of foreign nationals would be confirmed only after medical examination and the receipt of the test report regarding HIV.
- (c) Foreign nationals will be admitted only after obtaining the clearance from the Govt. of India. Foreign candidates having student's/provisional student's visa only are eligible for admission.

Note: Admission to full time/part time sponsored candidates will only be offered over and above the sanctioned intake provided departments concerned agree.

For NRI and Self Financing Foreign Nationals

Non-Resident Indian (NRI) nationals residing & studying abroad and self-financing non-sponsored foreign nationals who are interested in obtaining admission are eligible for admission subject to medical and Government clearances as per clause 2.2.

Foreign candidates including NRI and Self Financing Foreign nationals must have fulfilled the following :

- (i) Qualifications equivalent to educational qualifications and GATE discipline required for admission to PG programmes as given in **Table -1**,
- (ii) The candidates must have a minimum of two years of full-time work experience in a relevant field
- (iii) Certificate of good conduct and character from the Head of Institution last attended,
- (iv) Three reference letters.

3. ADMISSION PROCEDURE

3.1 Introduction

Admission to various Postgraduate (PG) academic programmes of the Institute is open to all Indian nationals irrespective of caste, creed and sex.

Admission to Postgraduate programmes for the academic session 2019-20 in different academic programmes leading to M.Tech./M.Arch./M.U.R.P. degrees including M.Tech. degree after M.Sc., for full time regular students with MHRD assistantship will be made on the basis of valid Normalized GATE marks only. Sponsored candidates may be admitted through an Interview/Written Test.

There are approved numbers of seats in different programmes for which assistantships are given by the MHRD to GATE qualified candidates selected for admission within the sanctioned intake. However, the Institute may admit additional eligible (GATE qualified) candidates without assistantship, provided the concerned departments agree to admit more than the sanctioned intake.

All the candidates seeking admission to the PG programmes leading to M.Tech./M.Arch./M.U.R.P. degree will have to apply online properly.

There are few programmes like M.Tech./PG Diploma exclusively for sponsored candidates for which separate admission process is followed and is carried out by the

concerned departments which may be contacted directly by the aspiring candidates.

3.2 General Information

- (a) Admission will be offered to the first semester of the various postgraduate programmes.
- (b) A candidate seeking admission to postgraduate programmes leading to M.Tech./M.Arch./M.U.R.P. degree is allowed to apply maximum for **4 departments** and may give prioritized preference for maximum of 13 academic programmes given in **Table-1. Choices (max. 13) once filled-in in the Application Form will not be changed for any reason after submission of online application.**
- (c) A student, who is admitted and registered for a postgraduate programme at the Institute but leaves without completing the programme, or discontinues his studies for any reason whatsoever, including termination from the programme for not achieving the required SGPA/CGPA for continuation of his registration in the said programme, shall not be admitted again to a programme at the same level, that is to say that a student who has/is withdrawn from the M.Sc. programme cannot be admitted to any other M.Sc. programme; a student who has/is withdrawn from the M.Tech. programme cannot be admitted to any other M.Tech. programme, of the Institute.
- (d) Selected candidates will be offered admission only in one programme depending on their preference and the merit.
- (e) The Institute reserves the right not to run any particular programme, if the number of students in that programme is less than the minimum number specified by the Institute at the time of admission.
- (f) All the students have to generally reside in the Institute Campus at Roorkee except those admitted to postgraduate programmes in the Department of Paper Technology, Saharanpur Campus, who will reside at the Saharanpur Campus of the Institute located about 35 km from Roorkee.
- (g) The Institute reserves the right to change its statutes and regulations relating to academic programmes and the modalities of admission without prior notice.
- (h) Candidates belonging to SC, ST, OBC-NC categories must upload along with online Application the requisite certificate as applicable from the competent authority, as per the list given in **Annexure-4**, failing which their candidature will not be considered under Reserved Category. The candidates under Persons with Different Abilities (PD) category will submit the certificate from the Medical Board of the District concerned.
- (i) For details regarding EWS please go through the link: <https://dopt.gov.in/sites/default/files/ewsf28FT.PDF>
Link for EWS certificate: <https://www.iitr.ac.in/admissions/uploads/PDFs/EWScertificate.pdf>
- (j) Candidates belonging to OBC category must submit photo copy of valid category certificate as per GOI at the time of registration.
- (k) Persons with Different Abilities (PD) candidates should submit along with the filled Application, the certificate in original, from a Govt. Medical Board. However, such a candidate shall have to appear before a Medical Board duly constituted by IIT Roorkee for this purpose. The Medical Board will decide the programmes which cannot be offered to a candidate, on the basis of the nature of

his/her disability. The candidate will be offered admission out of the remaining programmes as per the Institute policy also.

- (l) There is no age restriction for admission to a postgraduate programme.
- (m) In matters of interpretation of the provisions or any matter not covered herein this Information Brochure, the decision of the Chairman, Senate IIT Roorkee shall be final and binding on both the parties.

3.3 Application Process

For admission to PG programmes 2019, candidates need to register and fill the application ONLINE only by accessing <http://pgadm.iitr.ernet.in> from March 18, 2019 to April 12, 2019.

3.3.1 Application Fee

For General/GEN-EWS/OBC Category : Rs. 300/-

For PD/SC/ST Category : Rs. 150/-

For Foreign nationals : Nil

The requisite fee can be paid online using net banking or debit/credit card facilities. Additional charges will be applicable as per the rule of the concerned bank.

The Fee will not be accepted through any other mode.

3.3.2 How to Apply

Before applying, candidates are advised to read the PG Information Brochure 2019 carefully and keep ready the scanned copies of following testimonials for uploading:

- 1. Applicant Photo (Only JPG format allowed with max size 500KB)
- 2. Applicant Signature (Only JPG format allowed with max size 500KB)
- 3. UG all semesters/year Marksheets (Only PDF format allowed in a single pdf file with max size 5 MB)
- 4. UG Degree/Provisional Certificate (Only PDF format allowed in a single pdf file with max size 5 MB)
- 5. PG All semesters/year marksheet/Degree/Provisional Certificate (If applicable) (Only PDF format allowed with max size 5 MB)
- 6. GATE Score Card (Only PDF format allowed with max size 5 MB)
- 7. Maths at 10 + 2 level (10 + 2 Marksheets) (Only PDF format allowed with max size 5 MB)
- 8. Maths at UG level (UG Marksheets) (Only PDF format allowed with max size 5 MB)
- 9. PD Certificate (if applicable) (Only PDF format allowed with max size 5 MB)
- 10. SC/ST/OBC-NC/GEN-EWS Category Certificate (if applicable) (Only PDF format allowed with max size 5 MB)
- 11. Sponsorship Certificate, NOC, Experience Certificate for sponsored candidate only (Only PDF format allowed with max size 5 MB)

Apply for PG Programme

Step 1: Registration (Separate applications (with payment) are required for each category)

Step 2: Complete Application Form

Step 3: Proceed to Payment

Download the completed Application Form (Take a print out of the entire file. This printout is NOT to be sent to IIT Roorkee. It is only for candidate's own record purpose).

Table – 1
Details of Academic Programmes leading to M.Tech./M.Arch./M.U.R.P.

Sl. No	Academic Department/ Centre & (Code)	Academic Programmes		Eligible GATE Disciplines	Minimum Educational Qualifications
		Code	Name		
1	Architecture and Planning (ARD)	10	M.Arch.	AR	B.Arch. or its equivalent
		11	M.U.R.P.	AR/CE	B.Arch. or its equivalent or Bachelor's degree in Civil Engg./ B.Planning
2	Alternate Hydro Energy Centre (AHC)	12	M.Tech. Alternate Hydro Energy Systems	CE/AG/CH/EE /EC/ME/PI/XE	Bachelor's degree in Civil/Electrical/Mechanical/ Industrial/Chemical/Electronics/Computer/Agricultural/ Environmental Engg. or equivalent.
		13	M.Tech. Environmental Management of Rivers and Lakes	CE/AG/CH/EE /ME/PI/XE/AR /CY/BT/PH/M A/XL/EY	Bachelor's degree in Civil/Electrical/Mechanical/ Industrial/ Chemical/Agriculture/Environmental Engg./Biotechnology/Arch. /Town Planning or its equivalent or Master in Science in any subject with Mathematics at graduation level.
3	Chemical Engineering (CHD)	14	M.Tech. Chemical Engineering	CH	B.Tech./B.E. in Chemical Engineering/ Chemical Technology
4	Civil Engineering (CED)	16	M.Tech. Environmental Engg.	CE/CH	Bachelor's degree in Civil Engg./Chemical Engg./Environmental Engg. or equivalent
		17	M.Tech. Geomatics Engg.	CE/AR/CS/EC /EE /AG/MN	Bachelor's degree in Civil Engg./Electronics Engg./Electrical Engg./Computer Science/ Information Technology/Marine Engg./Mining Engg./Environmental Engg/Agricultural Engg/ Communication Engg/Architecture or equivalent
		18	M.Tech. Geotechnical Engg.	CE/MN	Bachelor's degree in Civil Engg./ Infrastructure/ Construction Engineering or equivalent.
		19	M.Tech. Hydraulic Engg.	CE	Bachelor's degree in Civil Engg. or equivalent.
		20	M.Tech. Structural Engg	CE	Bachelor's degree in Civil Engg. or its equivalent.
		21	M.Tech. Transportation Engg.	CE	Bachelor's degree in Civil Engg. or its equivalent.
5	Earthquake Engineering (EQD)	22	M.Tech. Soil Dynamics	CE	Bachelor's degree in Civil/Structural Engg. or equivalent.
		23	M.Tech. Structural Dynamics	CE	Bachelor's degree in Civil/Structural Engg. or equivalent.
		24	M.Tech. Seismic Vulnerability and Risk Assessment	CE	Bachelor's degree in Civil/Structural Engg. or equivalent.
6	Electrical Engineering (EED)	25	M.Tech. Electric Drives & Power Electronics	EE	Bachelor's degree in Electrical Engg. or its equivalent.
		26	M.Tech. Instrumentation and Signal Processing	EE/EC/IN	Bachelor's degree in Electrical/Electronics & Communication/Instrumentation Engg. or its equivalent.
		27	M.Tech. Power System Engg.	EE	Bachelor's degree in Electrical Engg. or its equivalent.
		28	M.Tech. Systems and Control	EE/EC/IN	Bachelor's degree in Electrical Engg. or Electronics & Communication/Instrumentation Engg. or its equivalent.

Sl. No	Academic Department/ Centre & (Code)	Academic Programmes		Eligible GATE Disciplines	Minimum Educational Qualifications
		Code	Name		
7	Electronics and Communication Engineering (ECD)	29	M.Tech. Communication Systems	EC	Bachelor's degree in Electronics & Communication Engg. or its equivalent
		30	M.Tech. R.F. & Microwave Engg	EC	Bachelor's degree in Electronics & Communication Engg. or its equivalent
		31	M.Tech. Microelectronics and VLSI	EC/PH	Bachelor's degree in Electronics & Communication Engg. or its equivalent M.Sc. (Physics); M.Sc. (Electronics)
8	Computer Science and Engg (CSD)	32	M.Tech. Computer Science & Engg.	CS	B.E./B.Tech. degree in Computer Science & Engineering/ Information Technology
9	Hydrology (HYD)	33	M.Tech. Hydrology	CE/AG/GG/XE/ PH/ EY	Bachelor's degree in Civil/ Agricultural Engg./ Hydrology or equivalent. M.Sc./M.Tech. in Chemistry/Geology/ Geophysics/ Applied Geology/Applied Geophysics/Physics/ Meteorology/ Geography Atmospheric Physics/Environmental Science with Mathematics in B.Sc. as one of the subjects or M.Sc. (Master's) degree in Statistics with Physics or Mathematics at B.Sc. or M.Sc. degree in Mathematics with Physics in B.Sc. or its equivalent.
10	Mechanical and Industrial Engineering (MED)	34	M.Tech. CAD, CAM & Robotics	ME/PI	Bachelor's degree in Mechanical/Industrial/Production Engg. or its equivalent
		35	M.Tech. Machine Design Engg.	ME/PI	Bachelor's degree in Mechanical/Industrial/Production Engg. or its equivalent
		36	M.Tech. Production & Industrial Systems Engg.	ME/PI	Bachelor's degree in Mechanical/ Industrial/Production Engg. or its equivalent
		37	M.Tech. Thermal Engg.	ME/PI	Bachelor's degree in Mechanical/Industrial/Production Engg or its equivalent
		38	M.Tech. Welding Engg.	ME/PI	Bachelor's degree in Mechanical/Industrial/Production Engg. or its equivalent
11	Metallurgical and Materials Engineering (MTD)	39	M.Tech. Industrial Metallurgy	MT/ME/PI/XE	B.Tech./B.E. in Metallurgy/Materials Engineering/ Mechanical Engineering/Production Engg/ Production and Industrial Engg /Ceramic Engineering
		40	M.Tech. Materials Engg.	MT/PH/ME/PI/ CY/XE	B.Tech./B.E. in Metallurgy/Materials Engineering, Mechanical Engineering/Production Engineering/ Production and Industrial Engg /Ceramic Engineering/Polymer Engg./Nanotechnology; or M.Sc. in Physics/Chemistry /Material Science/Polymer / Nanotechnology with Mathematics course at B.Sc. level
12	Paper Technology Saharanpur Campus(PPD)	41	M.Tech. Pulp & Paper	CH/ME/BT/TF/ EY	Bachelor's degree in Pulp & Paper Engg./ Chemical Engg./ Mechanical Engg./ Polymer Engg./ Cellulose Technology/ Biotechnology or equivalent. Note: The two years post B.Sc. diploma awarded by the IPT/DPT plus a minimum of two years relevant experience in Industry/ Research Organization will be considered equivalent to a B.Tech/B.E. degree
		42	M.Tech Packaging Technology	CH/BT/CY/ME/ TF	M.Sc. in Chemistry(PCM at B.Sc. level)/ Polymer Science (PCM at B.Sc. level)/ or B.Tech. in Pulp and Paper Technology/ Biotechnology/ Chemical Engg Chemical Technology/ Polymer Engg/ Process Engg/ Mechanical Engg/ Production Engg/ Packaging Technology/Printing Technology/ Textile Technology/ PG Diploma in Packaging/ Biochemical Engg. Industry sponsored candidate with aforesaid academic qualifications along with two years experience in Paper/Polymer /Packaging Technology. Additional Requirement: GATE qualified except for industry sponsored candidate.

Sl. No	Academic Department/ Centre & (Code)	Academic Programmes		Eligible GATE Discipline	Minimum Educational Qualifications
		Code	Name		
13	Water Resources Development & Management (WRD)	43	M.Tech. Irrigation Water Management	CE/AG	Bachelor's degree in Civil Engg. or its equivalent / Agricultural Engg. or M.Sc. Agriculture in Agronomy, Soil Science, Agrometeorology, with Mathematics as one of the papers at the level of B.Sc./B.Sc. Agriculture.
		44	M.Tech. Water Resources Development	CE/EE/ME	Bachelor's degree in Civil/Electrical/Mechanical/ Electronics & Telecommunication Engg. or equivalent.
14	Physics (PHD)	46	M.Tech. Solid State Electronic Materials	PH/EE/EC/MT	B.Tech. (Engg. Physics)/M.Sc. (Physics)/Bachelor's degree in Electrical/Electronics/Metallurgical Engg. or its equivalent.
		47	M.Tech. Photonics	PH/EE/EC/MT/ IN	M.Sc. (Physics/ Electronics/ Applied Physics/ Photonics/ Engineering Physics), B.Tech. (Engineering Physics/ Electronics/ Communication/ Electrical/ Instrumentation/ materials/ Metallurgy/ Nanotechnology)
15	Nanotechnology (NTC)	48	M.Tech. Nanotechnology	MT/ME/EC/CH/ BT/CE/CY/PH/ XL	B.Tech. (Met. & Mat. Engg./Mech. Engg./ E&C/Electronics/ Chemical Engg./ Biotechnology/ Civil/ Biochemical Engineering/ Biomedical Engineering/ Bioengineering/ Polymer Engg/ Polymer Technology/ Pharmaceutical Technology/Industrial Biotechnology/ Nanotechnology) or equivalent; M.Sc. (Physics/ Chemistry/ Biotechnology/ Life Science/ nanotechnology), with Maths at 10+2 or higher level.
16	Disaster Mitigation and Management (DMC)	49	M.Tech. Disaster Mitigation and Management	CE/ME/PI/CS/ CH/AR/GG/PH/ MA/XL/XE/EY/ BT	B.Tech. (Civil, Structural, Mechanical, Industrial, Chemical Engineering and Biotechnology /Computer Science & Engineering or equivalent; B.Arch. & B. Planning, M.Tech. in Geological Technology and Geophysical Technology or equivalent, M.B.A.; M.C.A.; M.Sc. in Physics/ Geophysics/ Geology/ Mathematics, Computer Science, Environmental Sciences, or equivalent (with Maths in B.Sc.).
17	Transportation Systems (TSC)	50	M.Tech. Infrastructure Systems	CE/ME/PI/CH/ EE/EC/CS/AR	B.E./B.Tech. (Civil/ Mechanical & Industrial/ Electrical/ Chemical Engineering/Electronics & Communication Engg/ Computer Science and Information Technology/ B.Arch./ B.Planning/B.Design or equivalent.
18	Biotechnology (BTD)	51	M.Tech. Bioprocess Engineering	CH/BT/AG/XE/ TF	B.E./B.Tech. or equivalent degree in Chemical Engineering/ Biochemical Engg/ Bioprocess Engg/ Chemical Technology/ Food Technology/ Agricultural Engg./ Biomedical Engg/ Bioengineering/ Polymer Engg./ Polymer Technology/ Plastic Technology/ Paper Technology/Ceramic Technology/ Petrochemical Engineering/ Textile Engineering/ Biotechnology or in allied field with maths in 10+2 level.

Codes of GATE disciplines are given below:

GATE Discipline	Code	GATE Discipline	Code	GATE Discipline	Code
Aerospace Engg.	AE	Electronics & Comm. Engg.	EC	Mining Engg.	MN
Agricultural Engg.	AG	Electrical Engg.	EE	Petroleum Engineering	PE
Architecture and Planning	AR	Ecology and Evolution	EY	Physics	PH
Biotechnology	BT	Geology & Geophysics	GG	Production & Industrial Engg.	PI
Civil Engg.	CE	Instrumentation Engg.	IN	Textile Engg. and Fibre Sci.	TF
Chemical Engg.	CH	Mathematics	MA	Engineering Sciences	XE
Computer Science & Information Tech.	CS	Mechanical Engg.	ME	Life Sciences	XL
Chemistry	CY	Metallurgical Engg.	MT		

Table-2
Conversion between Grade Point Average and Marks for the Purpose of Eligibility Check

Marks	10 point scale		9 point scale		6 point scale		5 point scale		4 point scale	
	CGPA	% Marks	CGPA	% Marks	CGPA	% Marks	CGPA	% Marks	CGPA	% Marks
40	4.00	40	3.45	38.33	2.30	38.33	2.00	40	1.62	40.50
45	4.50	45	3.90	43.33	2.55	42.50	2.25	45	1.80	45.00
50	5.00	50	4.37	48.56	2.85	47.50	2.50	50	1.98	49.50
55	5.50	55	4.78	53.11	3.19	53.17	2.75	55	2.13	53.25
60	6.00	60	5.34	59.33	3.56	59.33	3.00	60	2.38	59.50
65	6.50	65	5.76	64.00	3.85	64.17	3.25	65	2.55	63.75
70	7.00	70	6.19	68.78	4.13	68.83	3.50	70	2.75	68.75
75	7.50	75	6.70	74.44	4.45	74.17	3.75	75	2.95	73.75
80	8.00	80	7.15	79.44	4.75	79.17	4.00	80	3.16	79.50
85	8.50	85	7.60	84.44	5.05	84.17	4.25	85	3.35	83.75
90	9.00	90	8.05	89.44	5.35	89.17	4.50	90	3.58	89.50
95	9.50	95	8.50	94.44	5.70	95.00	4.75	95	3.80	95.00
100	10.00	100	9.00	100.00	6.00	100.00	5.00	100	4.00	100.00

3.4 Reserved Seats

Certain number of seats is reserved for candidates belonging to various categories. The details of the seats reserved (in percentage) under different categories at present as per the directives of the Govt. of India.

Notes:-

- (1) **The provisions for reservation of seats given above are subject to modification in accordance with any Govt. Order, if issued subsequently by the Govt. of India.**
- (2) It will entirely be the responsibility of the candidate to prove his/her eligibility in terms of minimum educational qualifications and for claiming reservation under a specific category, if any, at the time of counseling and thereafter.
- (3) **Candidate must ensure that he/she possesses the required eligible qualification and has valid Normalized GATE marks in the required discipline.**

3.5 Scholarships/Assistantship

- Assistantship @ Rs. 12400/- per month may be awarded to GATE qualified candidates as per norms for the duration of the programmes i.e. two years to the full time students for M.Tech./M.Arch./M.U.R.P. within the sanctioned intake excluding sponsored candidates. However, GATE qualified candidates do not automatically become eligible for the sanction of this assistantship.
- B.Tech. degree holders from any IIT with minimum CGPA of 8.00 on a 10 point scale and given admission without GATE are also eligible for MHRD assistantship.
- Scholarship/Assistantship will not be awarded to those who are in receipt of salary from any source. However, teacher candidates may be granted scholarship/assistantship in addition to the study leave benefits provided that they are not in receipt of any deputation allowance from their

employer, in addition to the study leave salary as per norms.

- The continuance of the assistantship/scholarship to a student shall depend upon his/her satisfactory progress report of work, attendance, conduct and the academic performance (SGPA/CGPA), as per Ordinances/Regulations in vogue.
- Under MoU with the Department of Atomic Energy, the candidates qualifying under Department of Atomic Energy Graduate Fellowship Scheme may be admitted to M.Tech. programmes. The details of the scheme may be obtained from www.hrdbarc.gov.in
- Some foreign scholarships may be available to selected M.Tech. students for doing their dissertation under exchange programmes such as DAAD Sandwich Model Programme of Germany, programme of KTH, Sweden, Macquarie University, Australia etc.

4. SELECTION AND ADMISSION

4.1 Basis of Selection for Admission

Admission will be made strictly in order of merit and the preferences for the programmes given by a candidate in his/her Application. The basis for determining candidate's merit position is given in **Table-3**.

Table-3
Basis for Selection

Candidate's Status	Basis for Selection
Regular candidates GATE qualified	Valid Normalized GATE marks only
Regular B.Tech. degree holders from the IITs without GATE score	CGPA \geq 8
Sponsored candidates(Full Time and Part Time)	Interview/Written Test & Relevant Experience

4.2 Offer of Admission for Regular candidates

The candidates will be offered admission through Common Offer Acceptance Portal (COAP)

Procedure for Up-gradation

Up-gradation will be done automatically only for higher preferences as filled by the candidate in Application Form on the basis of merit prepared, availability of seats in respective category/programme. This process will continue till Registration. Thereafter no up-gradation will be allowed even if a vacancy exists.

For Sponsored candidates

Offer letter for registration to the sponsored candidates shall be issued by IIT Roorkee.

4.3 Fee/Dues

The existing Institute fee/dues for various programmes are given in **Table-5** Any further details of the fee may be obtained from the Deputy Registrar (Academics), IIT Roorkee.

4.3.1 Fee/Dues by Indian Nationals

The fee structure given in **Table-4** is provisional and may be modified by the Institute as and when necessary, without intimation. The fee can be revised as per the guidelines of MHRD from time to time.

Table-4
Institute Fee* to be Deposited for Admission

.No	Particulars	Amount
1	Semester fee: (a) Tuition Fee (b) Other Fee (c) Hostel Fee	Rs. 5,000/- Rs. 4,600/- Rs. 15,000/-
2.	One Time Fee	Rs. 1400/-
3.	Yearly Fee for Group Insurance Scheme, Bhawan fund	Rs. 100/-
4.	Medical Insurance fee	Rs.380/-
5.	Refundable Deposits	Rs.3,000/-
	Total:	Rs. 29,480/-

Tuition Fee for Sponsored Candidates is Rs. 25,000/- per semester

* Tentative and subject to change.

Note:(1) Hostel Fee Rs. 8000/- and Mess Charges Rs. 16800/- per semester will be extra.

(2) Tuition fee is not chargeable from SC/ST students.

4.3.2 Fee /dues by Foreign Nationals

The GATE qualified foreign National selected for admission in the Institute shall be charged annual tuition fee of Rs. 6.00 lakh per year. Other dues will be extra as decided by the Institute. They may also be considered for any suitable fellowship/scholarship at par with Indian Students.

4.4 Academic Registration

A system of registration is followed for all the students joining the Institute. The selected candidates will have to register themselves **personally** on the date and time to be intimated to them. At the time of registration, the candidate is required to fill-up the registration cards and get himself/herself registered. After registration, students should report to the concerned Head of the Department/Centre and submit the joining report. The proof of joining the Institute shall be the registration card and the fee receipt. Scholarship/Assistantship will be granted only after

receiving the joining report from the departments/centre and the undertaking as per the Institute norms (wherever applicable). Regular classes will start as per the time schedule declared by the Institute. The candidates selected for admission to M.Tech. (P&P and Packaging Technology) shall have to report to the Head, Department of Paper Technology, Saharanpur (Campus) after registration.

4.5 Documents at the Time of Registration

The candidates admitted to various PG programmes of study must present themselves for the registration **in person** along with the following documents as per the schedule specified by the Institute:

- The letter from the Institute offering admission.
- The original and self attested copy of marks-sheet of the qualifying examination showing essential requirements. In case, the result for the qualifying examination has not been declared at the time of admission the same may be submitted till September 30, 2019. Under such circumstances, the admission will remain provisional until the candidate is able to submit the results indicating successful completion of the requirements of his/her qualifying degree, with the specified minimum percentage of aggregate marks/CGPA, by the specified date failing which the admission shall automatically be cancelled.
- The original and self attested copies of certificate and marks-sheet of High School or equivalent examination
- The original and self attested copy of GATE Score Card for GATE qualified candidates.
- A certificate from the College/University authority where from the candidate has to appear for the qualifying degree examination is given in **Annexure-1**.
- Relevant certificate(s) for Sponsored candidates are given in **Annexures-2 & 3** as applicable.
- The category certificate of SC/ST/OBC-NC/GEN-EWS, in original (along with an self attested copy), issued by a competent authority (list given in **Annexure-4**).
- A certificate from the candidate registered without production of proof of passing the qualifying examination/appeared in the backpaper(s)/supplementary(ies) till date of registration on **Annexure-5**
- A certificate from the Government Medical Board to support the PD status, if applicable.

4.6 Cancellation of Admission/Programme

The Institute reserves the right to cancel, at any stage, the admission of a candidate admitted to a programme and is later found that he/she is not entitled, being unqualified or ineligible in accordance with the Ordinances and Regulations in vogue, or suspension/termination of programme.

4.7 Matters of Dispute

Disputes, if any, arising out of or relating to any matter whatsoever shall be subject to the exclusive jurisdiction of the Roorkee Courts.

4.8 Ragging

Ragging is banned in the Institute and anyone indulging in ragging is likely to be punished appropriately and the punishment may include expulsion from the institution, suspension from the institution or classes for a limited period, or

fine with a public apology. The punishment may also take the shape of: (i) withholding of scholarships or other benefits, (ii) debarring from representation in events, (iii) withholding of results, (iv) suspension, rustication or expulsion from hostel or mess, (v) monetary fine etc.

5. CATEGORY CODES

Category Codes for candidates of General and reserved categories are given below in **Table-5**:

Table-5

Category	Code
General	GEN
Economically Weaker Sections	GEN-EWS
Other Backward Classes	OBC-NC
Scheduled Caste	SC
Scheduled Tribe	ST
Persons with Different Abilities	PD

Annexure-1

CERTIFICATE FOR APPEARING IN THE FINAL SEMESTER/YEAR EXAMINATION

(Required from candidates who are yet to appear in the qualifying examination)

In connection with the application of Mr./Ms. for admission to PG programme(s) at IITR, I hereby certify that he/she is a bonafide student of our institution. He/She is yet to complete the requirements of qualifying examination including theory, practical project examination and backpaper(s)/supplementary(ies) for B.E./B.Tech./M.Sc./..... **which is to be scheduled later on** (Strike out the non-applicable ones and write in the blank space if the degree is not mentioned) and the result is likely to be announced by 2019. The percentage of aggregate marks/CGPA obtained by him/her upto prefinal year examination is His/her conduct and character during his/her stay at the Institute/University has been "GOOD".

Place:
Date:.....

Signature of the Principal/Dean/Registrar/
Dy. Registrar/Proctor/Administrative Officer/
Asstt. Registrar of the institute attending/
last attended with seal

Annexure-2

SPONSORSHIP CERTIFICATE

(Required from full-time sponsored candidates only)

The undersigned is pleased to sponsor Mr./Ms. who is working in this organization for the last years and is presently holding the rank/position of for pursuing the PG programme (course) at IIT Roorkee in the Department of with specialization in the following areas:

1. 2.
3. 4.

His/her conduct and character has been good.

The Institution/Organization would relieve him/her immediately for joining the above course, if selected for admission. The Institution/Organization also agrees to pay the contingent/all expenses stipulated by the Institute. This is further certified that the sponsorship for admission will not be withdrawn midway till completion of the course. Our enterprise is registered in a stock exchange/had an annual turnover of above Rs. 5.0 crores in the past two years (for candidates working in a Firm/Company/Industry).

Place:

Signature of Head of the
Institution/Organization with seal

Date:

Name
Designation

NO OBJECTION CERTIFICATE
(Required from candidates seeking admission on part-time basis)

The undersigned is pleased to permit Mr./Ms. who is working in this organization for the last years and is presently holding the rank/position of for pursuing the PG programme (course) at IIT Roorkee in the Department of with specialization in the following areas:

1. 2.
3. 4.

His/her conduct and character has been good.

The Institution/Organization would relieve him/her immediately for joining the above course, if selected for admission. If admitted the candidate will be permitted to be present at the Institute as required by the academic schedule for a period of three years and will continue to remain in service of this organization for the duration of the course.

Place:

Signature of Head of the
Institution/Organization with seal

Date:

Name

Designation

AUTHORITIES WHO CAN ISSUE CASTE/TRIBE CERTIFICATE

SC/ST/OBC/GEN-EWS candidates should submit certificate issued by any of the following authorities:

District Magistrate/Additional District Magistrate/Collector/Deputy Commissioner/Additional Deputy Commissioner/Deputy Collector/1st Class Stipendiary Magistrate/City Magistrate/Sub-Divisional Magistrate/Taluka Magistrate/Executive Magistrate/Extra Assistant Commissioner/Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate/Revenue Officer not below the rank of Tehsildar/Sub-Divisional Officer of the area where the candidate and/or his/her family normally resides/Administrator/Secretary to Administrator/Development Officer (Lakshadweep Island).

(Certificate issued by any other authority will not be accepted.)

Annexure-5
(required at the time of Registration)

**UNDERTAKING BY THE CANDIDATE WITHOUT PRODUCTION OF
PROOF OF PASSING THE QUALIFYING EXAMINATION/APPEARED
IN THE BACKPAPER(S)/SUPPLEMENTARIES TILL DATE OF
REGISTRATION**

I, son
/daughter/ward of Mr./Ms.

hereby give an undertaking that I have appeared in all the examinations including practicals/ projects/ theory/ backpaper(s)/ supplementary(ies) before the date of registration which is to be scheduled later on and only result is awaited, which is likely to declare

Place: Signature

Date: Name.....